

# Orchids of Nepal—6

BY

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(With five text-figures)

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The genera that are placed under the series *Pleuranthae*—subseries *Sympodiales* by Schultes & Pease (1963) are treated in this paper which is the sixth of the series on Nepal Orchids. The genera dealt with are *Cremastra* and *Oreorchis* (subtribe *Cryptoideae*), *Cymbidium* (subtribe *Cymbidieae*), *Anthogonium*, *Calanthe*, *Pachystoma* and *Spathoglottis* (subtribe *Phajaeae*); however the genera are arranged alphabetically.

## ARTIFICIAL KEY TO THE GENERA

- A. Inflorescence terminal; pollinia without appendage :
  - B. Pollinia 8; sepals free :
    - C. Nodose rhizome. Flowers hairy, small c. 1.25 cm in diam.; sepals conniving; column elongate produced into a foot; lip 3-lobed, disk with fimbriate ridges ..... *Pachystoma*
    - CC. Creeping rhizome bearing pseudobulbs. Flowers c. 2.5 - 3.8 cm in diam.; sepals spreading, column elongate, foot absent; lip 3-lobed, disk pubescent .... *Spathoglottis*
  - BB. Pollinia 4; terrestrial :
    - C'. Sepals connate into a cylindrical tube; petals linear, claws free within the sepals; column elongate, foot absent. Flowers on a leafless lateral raceme.....*Anthogonium*
    - C'C'. Sepals and petals distinct, suberect; column long. Terrestrial with 1 leaf.....*Oreorchis*
- AA. Inflorescence terminal; pollinia appendaged :
  - B'. Lip spurred, claw connate into a tube with the column, bases of pollinia long resembling caudicles. Terrestrial with plicate leaves .....*Calanthe*
  - B'B'. Lip not spurred nor conspicuously saccate; column not produced into a foot; sepals petals subequal, spreading; lobes of lip embracing the unwinged column.....*Cymbidium*
  - B'B'B'. Sepals, petals and lip very narrow and conniving in a tube. Scape leafless; flowers in a raceme.....*Cremastra*

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**Anthogonium Lindl.**

According to Schultes & Pease, the name refers probably to the curious angle at which the tubular flower is joined to the pedicellate ovary.

**Anthogonium gracile** Lindl. Gen. et Spec. Orch. 426, 1840 ; F.B.I. 5 : 822, 1890 ; King & Pantl. 96, t. 134, 1894 ; Hara, 425, 1966. (Fig. 1).

Terrestrial slender orchid with small pseudobulbs ; inflorescence a simple or branched raceme. Flowers resupinate i.e. labellum posterior due to the torsion of the flower, pink ; sepals united to form a tubular structure with tips free, short ; petals included, linear, long clawed. Lip adnate to the base of the column, long clawed, limb recurved, obscurely lobed, spotted red. Flowering during August and September. Distributed between 1220 to 1830 m. Collected from Dolaghat to Chaubas, Sundarijal, Buludanda and Sheopuri.

**Calanthe R. Br.**

The name alludes to the beautiful flowers of most of the species. These are terrestrial with pseudobulbs and bear sizable distinctly folded leaves. The inflorescence is either erect or arching.

ARTIFICIAL KEY TO THE SPECIES OF *Calanthe*

- A. Spur absent : flowers c. 1·8 cm in diam. ; lip brown-purple with 3 large fleshy ridges ..... *tricarinata*
- AA. Spur present ; flowers large—c. 3 cm or more in diam.
  - B. Petals narrow ; lip longer than the sepals—
    - C. Lip with 3 basal lamellae ..... *plantaginea*
    - CC. Lip without lamellae ..... *chloroleuca*
  - BB. Petals broad ; lip hardly exceeding the sepals ..... *masuca*

**Calanthe chloroleuca** Lindl. Fol. Orch. 10, 1828-29 ; F.B.I. 5 : 852, 1890 ; King & Pantl. 231, 1898 ; Hara, 428, 1966.

Scape stout, bracts very small. Sepals ovate-lanceolate, greenish, streaked with 3 red nerves ; petals lanceolate, 3-nerved, yellowish. Lip white, sidelobes small, rounded and folded on the middle lobe, midlobe obcordate, bilobed ; spur stout, longer than the sepals, puberulous. Authority Hara.

**C. masuca** (Don) Lindl. Gen. et Spec. Orch. 249, 1840 ; F.B.I. 5 : 851, 1890. *Bletia masuca* D. Don, Prodr. Fl. Nep. 30, 1825.

Terrestrial ; flowers pale or dark purple. Sepals c. 2 cm long, lanceolate, acuminate, 5-nerved ; petals obovate or broadly oblong 3-5-nerved. Lip exceeding the sepals c. 2·25 cm long, calli yellow, sidelobes falcate, oblong, midlobe much longer, broadly reniform, widened to c. 1·5 cm.

spur longer than the sepals. Flowering from July to September. Distributed at 1220 to 1980 m. Collected from Kakni hills, Brajrabarahi.

**C. plantaginea** Lindl. Gen. et Spec. Orch. 250, 1840 ; F.B.I. 5 : 853, 1890 ; Duthie, Orch. North-West. Himal. 122, 1906. (Fig. 2).

Flowers pale lilac ; sepals ovate-lanceolate, 3-5-nerved ; petals oblanceolate, acuminate, 3-nerved. Lip longer than the sepals with 3 small basal lamellae, sidelobes cuneate-obovate, midlobe with 3 small ridges near the base, subtruncate, apiculate, spur longer than the sepals. Flowering during March and April. Distributed at 2135 to 2440 m. Collected from Papung to Topkegola, Godavari, locality unknown (Herklotts).

**C. tricarinata** Lindl. Gen. et Spec. Orch. 18, 1840 ; F.B.I. 5 : 847, 1890 ; Duthie, Orch. North-West. Himal. 119, 1906. (Fig. 3).

Scape stout ; flowers greenish-red ; sepals lanceolate, acuminate, 7-nerved ; petals nearly as broad, acuminate, both green outside and whitish along the margins, 3-nerved. Lip sessile, brownish-purple, disk with 3 large crenulate ridges ; spur absent. Flowering during April and May. Collected from Ghorepani forest (Thakkhola area), Naukhola, locality unknown (Herklotts).

### **Cremastra Lindl.**

The generic name refers to the pedicellate ovary. They are terrestrial orchids and are small and insignificant plants.

**Cremastra appendiculata** (D. Don) Makino, in Bot. Mag. Tokyo, 18 : 24, 1904 ; Schlechter, Orch. Sino-Japan 225, 1919 ; Hara, 429, 1966. *Cymbidium appendiculata* D. Don, Prodr. Fl. Nep. 36, 1825 ; *Cremastra wallichiana* Lindl. Gen. et Spec. Orch. 173, 1833 ; F.B.I. 6 : 16, 1890 ; King & Pantl. 182, t. 246, 1898.

Terrestrial with a solitary leaf and the flowering scape about 50 cm long. Flowers purple *c.* 3.8 cm in diam., sepals and petals very long, narrow, conniving into a tube below, lanceolate, acuminate and spreading, recurved above. Lip adnate to the base of the column, erect, linear, base saccate, tip dilated and 3-lobed, lobes linear ; column long and straight with top dilated and 3-lobed. Flowering during June. Collected from Hongaon to Sempung at *c.* 1980 m.

### **Cymbidium Sw.**

The name alludes to the boat-shaped lip. These are mostly epiphytic but some are terrestrial as well. Leaves are usually very long, narrow

and coriaceous. Inflorescence is pendulous, arching or erect. Floral shape is diversified so also is the coloration.

ARTIFICIAL KEY TO THE SPECIES OF *Cymbidium*

- A. Labellum broad, rostellum usually not beaked—
  - B. Leaves elliptic-lanceolate, 15-25 cm long ; scape shorter than the leaves, few-flowered ; fls. c. 3.5 cm in diam. .... *lancefolium*
  - BB. Leaves very long, tips usually lobed ; scape many-flowered ; fls. c. 3.5 cm in diam. .... *simulans*
  - BBB. Leaves linear or linear-lanceolate—
    - C. Flowers c. 5 - 6 cm in diam.
      - D. Bracts large, equalling or exceeding the ovary ; leaves 60-95 cm long.....*cyperifolium*
    - DD. Bracts small—
      - E. Lip pubescent ; leaves c. 65-75 cm by 1.5-2 cm., not notched ; fls. 3.5-5 cm in diam .....*pendulum*
      - EE. Lip pubescent and ciliate all over ; leaves c. 30-65 cm by 2-4 cm ; fls. c. 5-6 cm in diam.....*giganteum*
      - EEE. Lip papillose within and not ciliate ; leaves c. 60-95 cm by 1-2 cm ; fls. c. 5-6 cm in diam..... *longifolium*
    - CC. Flowers c. 8-10 cm in diam. ; long fimbriate hairs on the margin of the lip.....*grandiflorum*
- AA. Labellum narrow ; rostellum beaked ; bracts small.....*elegans*

***Cymbidium cyperifolium*** Wall. ex Hk. f. in Fl. Brit. Ind. 6 : 13, 1890.

Epiphytic ; flowers greenish and fragrant ; sepals and petals linear-lanceolate, acute pale green and yellow streaked with red ; lip narrow, glabrous, greenish or greenish-white, spotted red. Flowering during March and April. Collected from Godavari top at c. 2135 m.

***C. elegans*** Lindl. Gen. et Spec. Orch. 163, 1833 ; Hara 430, 1966. *Cyperorchis elegans* Bl. Rumphia 4 : 47, 1836 ; F.B.I. 6 : 14, 1890 ; King & Pantl. 159, t. 259, 1898.

Epiphytic. Flowers white or pale yellow, sepals and petals linear-oblong, acute, tips recurved. Lip as long as the petals, slightly recurved, sparsely hairy towards the base, central ridges terminating below in 2 long pubescent calli, hypochile narrowly cuneate, sidelobes spreading but apically incurved, obtuse nearly as long as the midlobe, midlobe sub-orbicular, margin undulate. Flowering from September to November. Distributed at 1825 to 2135 m. Collected from Sheopuri and Kakni.

***C. giganteum*** Wall. ex Lindl. Gen. et Spec. Orch. 163, 1833 : F.B.I. 6 : 12, 1890.

Epiphytic, inflorescence longer than the leaves. Flowers smaller than *C. grandiflorum*, c. 5-6 cm in diam. ; floral bracts minute ; sepals and petals oblong-lanceolate, acute, green streaked with purple all over, midlobe large, orbicular. Flowering during September and October. Distributed between 1220-1525 m. Collected from Godavari, Sundarjal, Nall near Banepa.

**C. grandiflorum** Griff. Icon. Pl. Asiat. t. 321, 1874 ; F.B.I. 6 : 12, 1890 ; King & Pantl. 192, t. 256, 1896 ; Hara 430, 1966. (Fig. 4).

Epiphytic. Flowers sweet smelling, c. 10 cm in diam., sepals and petals oblong-lanceolate, acute, green, dorsal sepal incurved lateral sepals recurved. Lip yellowish, pubescent and ciliate, midlobe large, suborbicular, wavy and crenulate, speckled with purple spots, two hairy ridges on the disk between the sidelobes. Flowering during May and June. Distributed between 1525 to 2300 m. Collected from Rhingmo to Jubing, Bokejunde near Trisuli, Bhojpur.

The presence of long fimbriate hairs on the margin of the lip is a very characteristic feature of this species.

**C. lancefolium** Hook. Exot. Fl. t. 51, 1828 ; F.B.I. 6 : 9, 1890. (Fig. 5)

Epiphytic ; scape erect and usually shorter than the leaves. Flowers fragrant ; c. 3.5 cm ; sepals yellowish or pale green, lanceolate, acuminate ; petals rather broader, white or paler, with a pink midrib. Lip white and spotted purple, sidelobes narrow and rounded, midlobe ovate, obtuse, slightly curved downwards, 2 median lamellae between the sidelobes, column greenish with purple markings. Flowering during June to August. Distributed at 1220 to 1525 m. Collected from Sheopuri, Sundarjal, Nagarjung, locality unknown (Herklotts).

**C. longifolium** D. Don, Prodr. Fl. Nep. 36, 1825 ; Lindl. Gen. et Spec. Orch. 163, 1833 ; F.B.I. 6 : 13, 1890 ; King & Pantl. 196, t. 254, 1894 ; Hara 430, 1966 ; *Cymbidium erythraeum* Lindl. Journ. Linn. Soc. 3 : 30, 1859.

Epiphytic ; with the inflorescence curved in the upper part. Flowers smaller than that of *C. giganteum*, c. 5-6 cm. in diam., mildly scented, floral bracts minute. Sepals and petals linear-oblong or even lanceolate, acute, greenish and streaked with red or purplish lines. Lip papillose within not ciliate ; midlobe broadly ovate or orbicular, white and spotted with red. Flowering from late September to November. Distributed at 1830 m. Collected from Sheopuri above Tokha.

The smaller sized flowers and the absence of marginal fimbriate hairs on the lip are characteristic features.

**C. pendulum** (Roxb.) Sw. in Nov. Act. Soc. Sci. Upsal. 6 : 73, 1799 ; King & Pantl. 188, t. 251, 1898 ; Duthie, Orch. North-West. Himal.



136, 1906 ; Hara, 431, 1966 ; *Epidendrum pendulum* Roxb. Pl. Corm. 1 : 35, t. 44, 1795 ; *Cymbidium aloifolium* Lodd. Bot. Cat. 10, t. 967, 1825 non Swartz, F.B.I. 6 : 10, 1890 (pp).

Epiphytic with inflorescence decurved from base, and covered by many imbricate sheaths, shorter than leaves. Flowers not crowded, light yellow, c. 3.5-5 cm in diam., floral bracts minute. Sepals slightly dilated near their apices, oblong, petals as long as sepals, margins yellow. Lip oblong, dilated and sub-saccate at base, midlobe blunt, emarginate, decurved, side-lobes with blunt apices and erect, disk with two lamellae which are divergent at the base. Flowering during May to July. Distributed at 305 to 915 m. Collected from Hittaura and Dhankutta.

*C. pendulum* Sw. and *C. aloifolium* Sw. are distinct species and the differences have been shown by King & Pantl. Similarly *C. simulans* is also confused with *C. aloifolium* Sw. and this has been clarified by Cooper (Dist. Gard. 2 : 610, 1915).

*C. simulans* Rolfe, in Orch. Rev. 25 : 175, 1917 ; Holttum, 519, 1953 ; Hara, 413, 1966 ; *C. aloifolium* Sw., sensu Hk. f. in F.B.I. 6 : 10, 1890 ; King & Pantl. 189, t. 252, 1898.

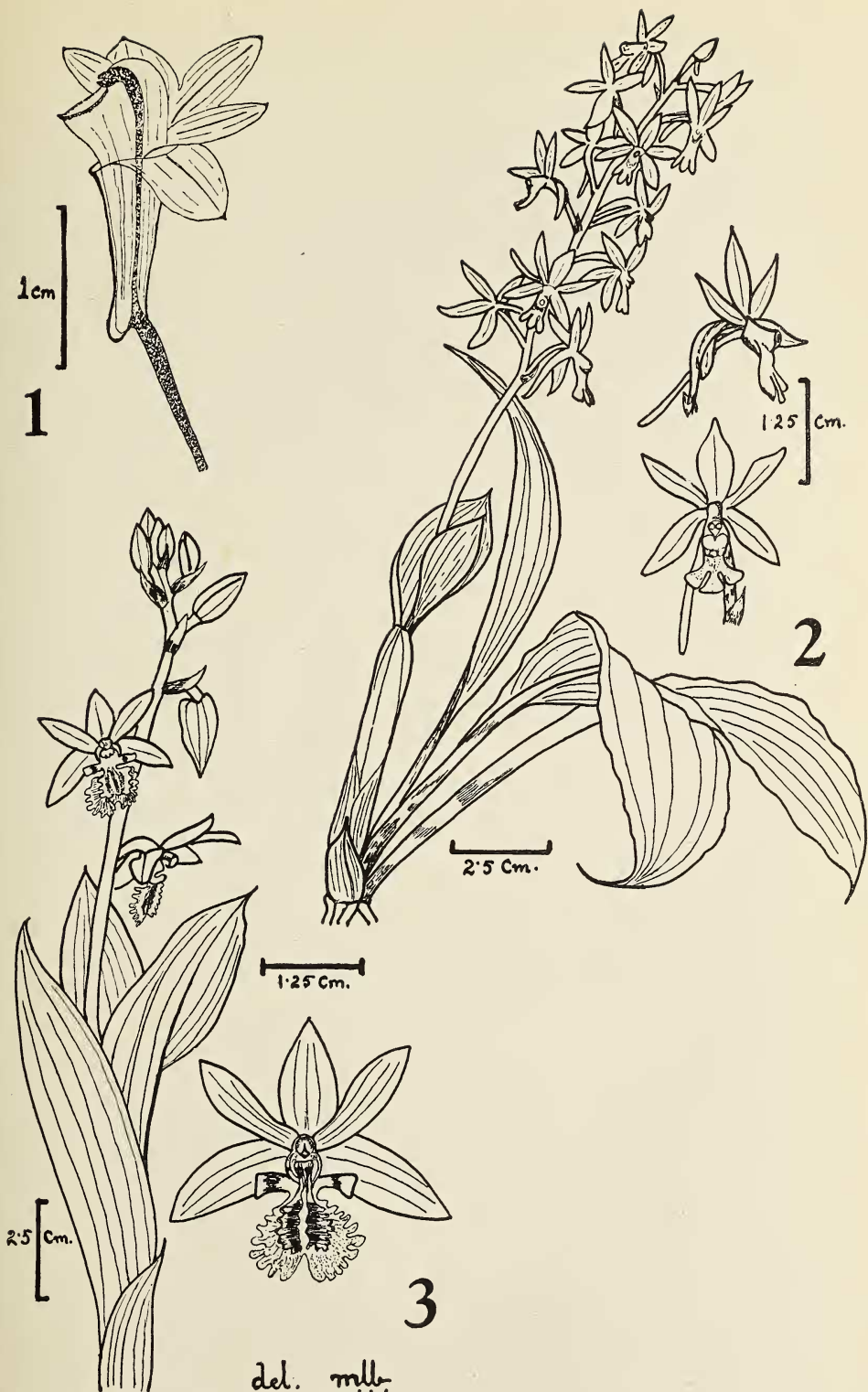
Epiphytic with inflorescence usually 25 cm. long and pendulous. Flowers variable in colour and size, usually dull purplish-brown with pale borders, c. 3.5 cm in diam. ; sepals and petals linear-oblong, subacute. Epichile broadly oblong and equalling the hypochile, disc with two curved thick lamellae. Flowering during May and June. Distributed in the tropical region, particularly in the terai at 300 to 915 m. Collected from Dingla Khandbari, Hittaura, Dhunibesi, Dhaitarbesi.

### Oreorchis Lindl.

Terrestrial and saprophytic orchids with 1 or 2 leaves which are narrow. Flowering stem erect with small flowers.

*Oreorchis foliosa* (Lindl.) Lindl. Journ. Linn. Soc. 3 : 27, 1859 ; F.B.I. 5 : 709, 1890 ; King & Pantl. 183, t. 137, 1898 ; Duthie, Orch. North-West. Himal. 131, 1906 ; Hara, 446, 1966 ; *Corallorhiza foliosa* Lindl. Gen. et Spec. Orch. 535, 1840.

Leaf solitary, oblong-lanceolate and with prominent nerves. Flowers red or reddish c. 1 cm in diam., dorsal sepal linear-oblong, subacute, straight, lateral sepals falcately oblong, acuminate ; petals broadly oblong, obtuse. Lip many-nerved, base produced into a sac, lateral lobes erect, rounded and short, midlobe as large as both the side lobes, notched. (Flowering during July). Collected from Bangukhola, Sama (Kitamura).



Figs. 1. Flower of *Anthogonium gracile* Lindl.  
 2. *Calanthe plantaginea* Lindl.; 3. *C. tricarinata* Lindl.